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Description of variation of genlculate's Features *of Phyllodiaptomustunguidus* shen et Tai and Sex-linked inheritance of Calanoida in Freshwater

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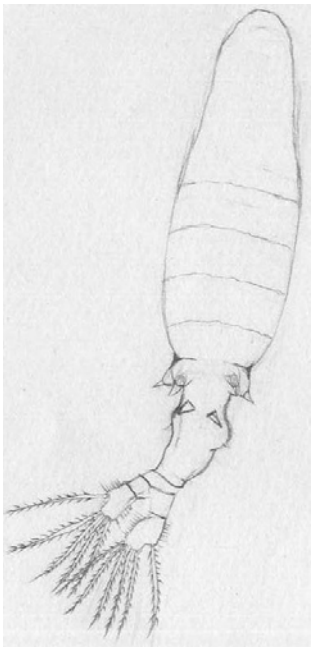
Abstract: In the present paper , variation of genlculate's Features *of Phyllodiaptomustunguidus* shen et Tai of Calanoida are described.The author finds that Right first antenna of female species have changed into genlculate and first antenna of male species changed into genlculate,which can be explained by X- Sex-linked inheritance,this isn't a disease but genetic characteristic which is better for the living of the species.

Key words: Crustacea ; Calanoida ; new species ; Aha Reservoirs

1 Description of variation of genlculate's Features *of Phyllodiaptomustunguidus* shen et Tai

1.1 Characteristics of the normal species

The body of the female is very slender,about 1.70-1.956mm. long. The central healing of The fourth and fifth thoracic segments, Posterior extension of the two angle, There is a thick thorn in the top. The abdomen is divided into three segments. genital segment of frist half has a sruck on both sides and one apophysis in the centrtion of inner margin. Length of the second abdominal segment and Caudal ramus with setae similar to ench other. Length of caudal ramus with setae larger than the width. Oocysts containing about 32-66 egg sac. The five swimming legs has one stuck outside the barbed end of the angle. Length of Section one of outside the limb is 2 times Width. Article 3 of the end of a thin section and a long barbed setae barbed.endopod is elongated, 1 hours. Fig. 1-2.



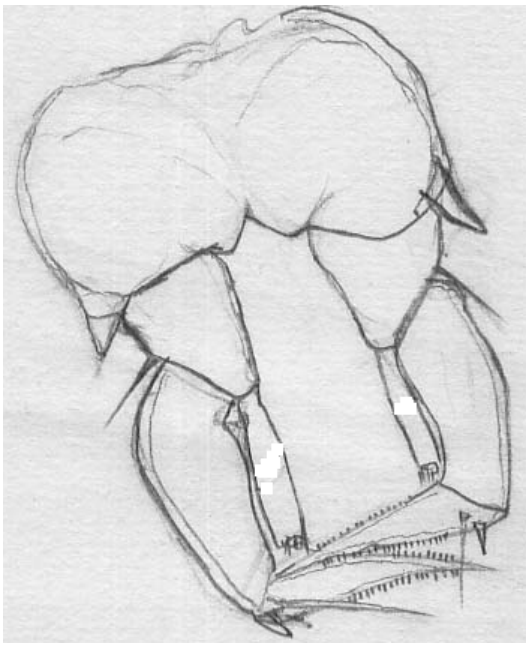


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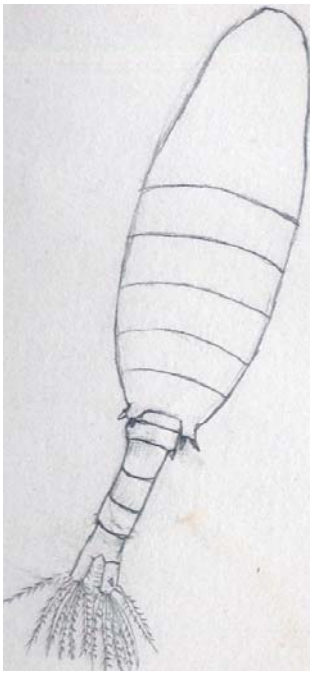
Fig.1. female overall

Fig.2 .five swimming legs of female

Male characteristics The body of the male is about 1.69 mm.long. And female body shape is similar to it. The five swimming legs of posterior angles are expansion and pointed tip. The top left corner of the gill is extremely small, and the right corner after the fate of the plume has a long hair.genital segment of the right posterior horn has one acute stuck.. Length of caudal ramus with setae is 2 times Width. Right caudal ramus with setae's upper has a small thorn.Genlculate's third has one comb neurite,about 10 sawtooth.. The end of the tooth is larger. Outer end of the angle of the frist coxa of five swimming legs has a spike and Within the end of angle has one large leaf-shaped apophysis.Inner cardinal angle of the second coxa of five swimming legs has a fingelike Prominece and there is transparent coating one along inner edge.The first nodosity of exopodite of five swimming legs is short and second nodosity is oval.Outer side of the central have moundy prominence, pleuracanths is short ,hooklike outward. Endopod of five swimming is round lobulation, Sharp end . inside has a spinule and outside have a list of spinule.There is a spike in within the end of the angle of first coxa of five swimming legs and There is a spinlet in second coxa inner margin of the frist. second coxa of five swimming legs of burl of exopodite apophysis and densely covered aesthetasc; There is fime sawthooth in the inner margin.clamp stuck is longer than clamp plank.There is mat bristle in a pointclamp stuck of feel pad.ednopod sumbit baculine and there is spinlet in bottom .Fig.(3-8).



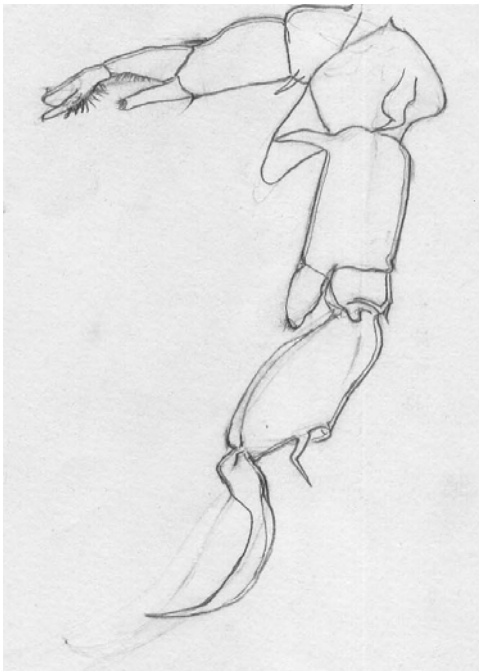


Fig.3. male overall

Fig.4 .five swimming legs of male

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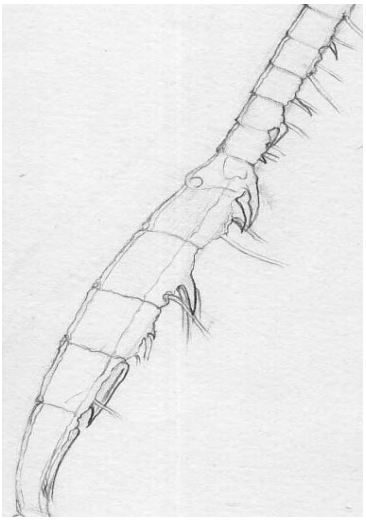


Fig.5 . the middle of Genlculate have splinter Part

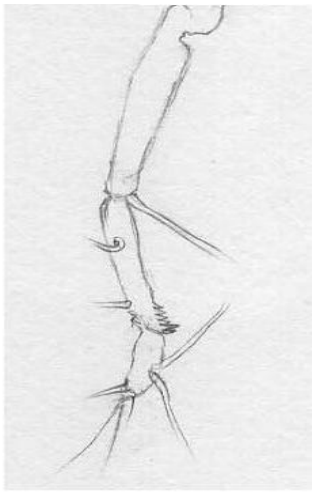
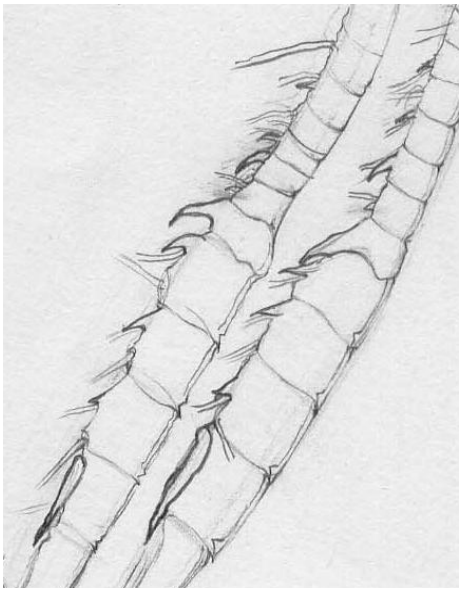


Fig.6. At the end of threeof Genlculate



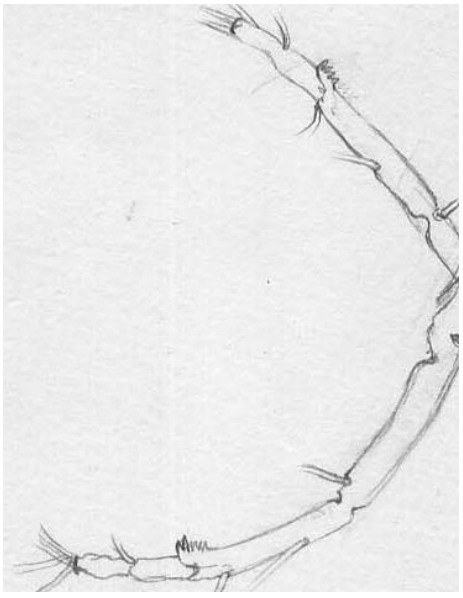


Fig.7.the middle of genlculate(Abnormalspecies)Fig.8.At the end of three of Genlculate(Abnormal species)

1.2 Abnormal types ‘s characteristics

Female characteristics Characteristics of the body and swimming legs of abnormal types of female and normal female species are the same,but right first antennae of abnormal types of female change into genlculate . Fig.B.

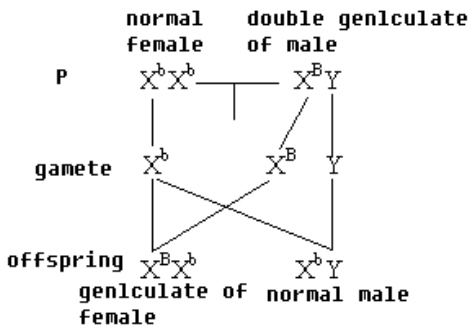
Male characteristics Characteristics of the body and swimming legs of abnormal types of male of characteristics and normal male species are the same,but first antennae of abnormal types of male hange into genlculate . Fig.D.

2 genlculate’s Features of Sex-linked inheritance

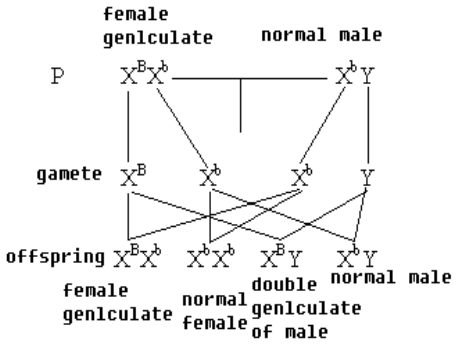
2.1 X- Sex-linked inheritance

Genlculate’s features of X-sex-linked inheritance of Calanoida is dominance.thisX-sex-linked inheritance is avail species evolution. to improve balance function and the role of prey on and

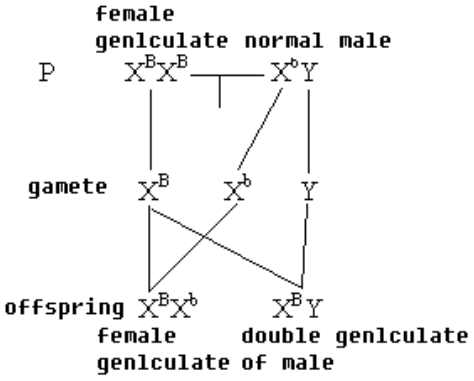
amphimixis,B of b dominant. Fig (a~f).



a



b



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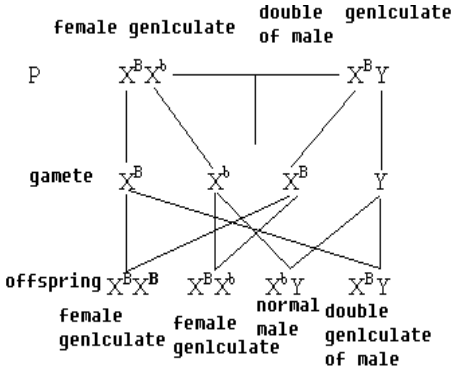
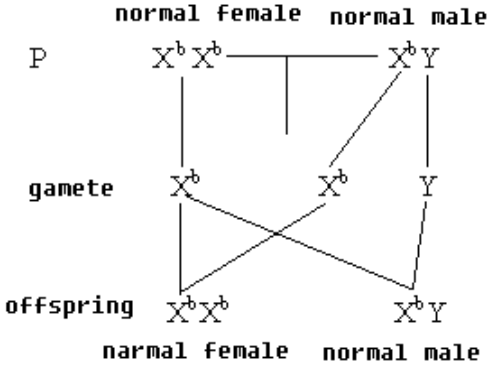
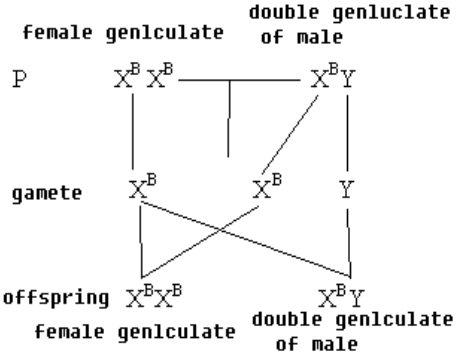


d



e



f

2.2 Characteristics'photos genlculate's features

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Fig.A . Normal female species

Fig.B. Abnormal female species

Fig.C. Normal male species

Fig.D. Abnormal male species

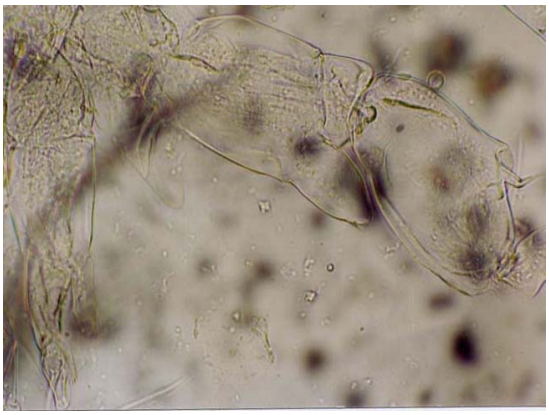

Fig.E.five swimming leg(Abnormal male species) Fig.F. five swimming leg(Normal male species)

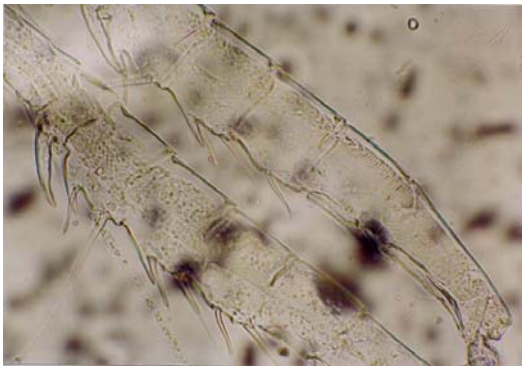

Fig.D. middle of genlculate of spine

Fig.H. 15-17 of genlculate

3 discussions

Aha Reservoir protection area is divided into the point source industries and coal mines, for a total of about 118, there is one of 86 industrial enterprises, has 32 coal mines. [2]Coal contains many iron, manganese metal material, which can change color, change the water environment, freshwater copopoda, there are the fresh water lake in the flow of matter and energy an important aspect, in their own environment changes when the structure itself has to change.

The survey we found that Calanoida of right first antenna of female species can special into genlculates, first antenna of male species can double special into genlculate. from 1776 to 2009, Research of freshwater Calanoida has 233 years,but no report about the above phenomenon. The emergence of this phenomenon offers the original classification unit of freshwater calanoida a question. Cephalothorax and abdomen have one joint activities. the first antenna of Female is so long that itcan reach or beyond caudal ramus with setae. Right first antenna of male hase changed into genlcuate.(Calanoida)。Is this statement correct? The answer is yes.

This variation to the freshwater situation calanoida purpose of a classification problem,from the executive to hold limb classification has some limitations are, and give people a question about the environment, the environment changes,genes make or ganisms change, this change is not necessarily a bad thing.

References

[1] Fauna Editorial Committee,Academia Sinica , Science Press,Peking,China,1979.

[2] shi li,yi lu,li yue yue.guo ke. Guiyang aha source of drinking water reservoirs to protect the status quo and countermeasures, Guizhou water power.2008,22(3)

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